

**METHOD, APPARATUS, AND COMPUTER PROGRAM PRODUCT FOR  
IMPLEMENTING PACKET ORDERING**

**Abstract of the Disclosure**

A method, apparatus, and computer program product are provided for  
5 implementing packet ordering in a network processor. Packets are received  
and placed on a receive queue and a queue entry is provided for each  
received packet. The queue entry includes for each autoroute packet, an  
autoroute indication and a selected transmit queue. An associated ordering  
queue is provided with the receive queue. A software-handled packet is  
10 dequeued from the receive queue and the dequeued software-handled  
packet is placed on the ordering queue. Each autoroute packet reaching a  
head of the receive queue is automatically moved to the selected ordering  
queue.